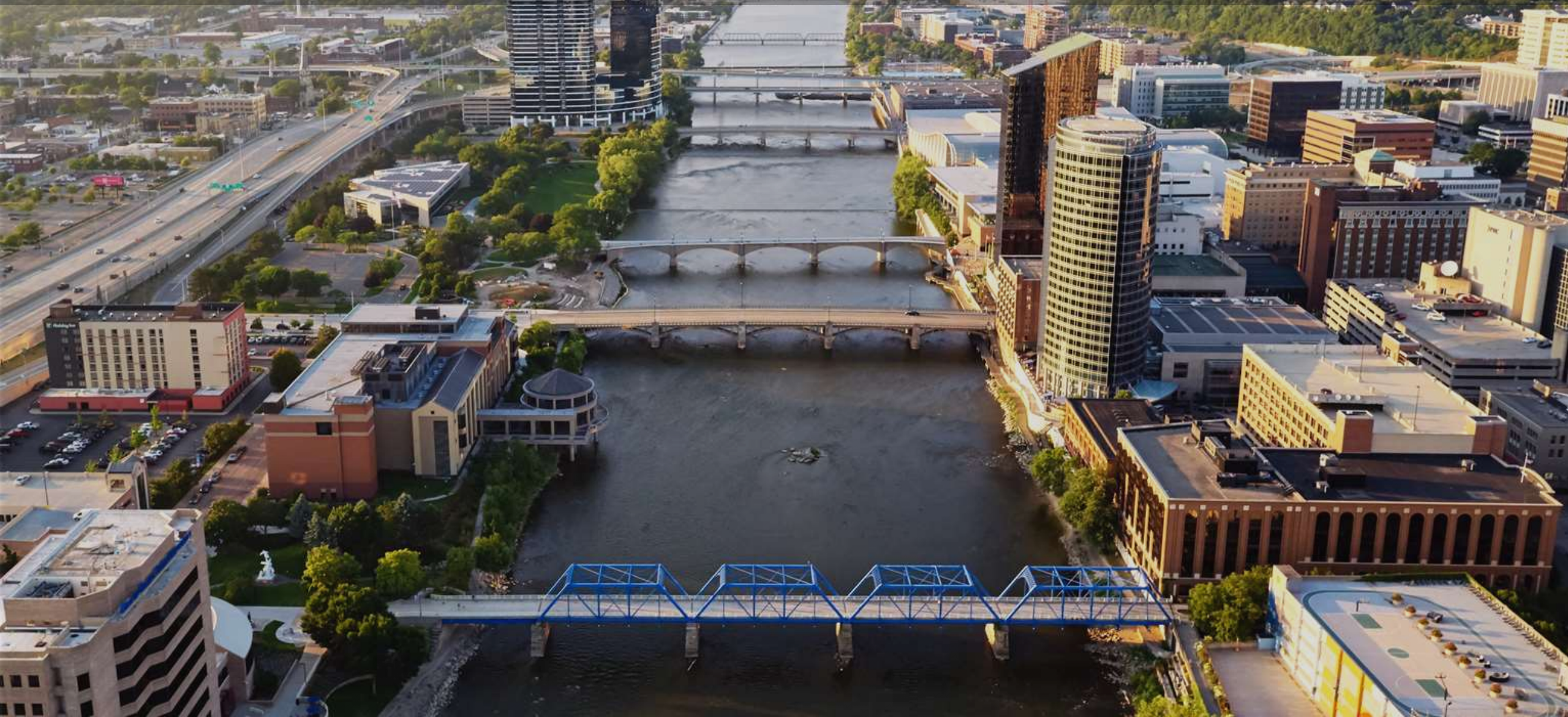


# Grand River Restoration: A River for All





# REIMAGINING THE RIVER



## 2002 Grand Rapids Master Plan

- Broadening the visibility of the river, and improving access to it and its edge through continuous public access
- Expanding greenspace and recreation opportunities

2,500 participants  
12 month process



## 2010 - present Grand Rapids Whitewater

Restoring the Rapids to improve overall river health and recreational opportunities within the region

1,000s of participants  
ongoing process



## 2017 Parks & Recreation Strategic Master Plan

Building a Grand River Waterfront and using the river's various tributaries and trails to create a connected network

5,300 participants  
10 month process



## 2012 Green Grand Rapids

Reclaiming and reinvesting in a clean, accessible, beautiful, and green river

1,800 participants  
17 month process



## 2015 GR Forward

- Creating an outdoor adventure city
- Establishing Grand Rapids as the hub in a regional river trail system
- Enhancing neighborhood access to the river

4,400 participants  
20 month process



## 2017 - present River for All

Implementing the vision and direction expressed from preceding plans by designing 6 opportunity sites and a 7.5-mile connected trail network flanking the river corridor.

1,700 participants  
11 month process

OWASHTANONG  
(Grand River)



## Waterfront Revitalization Movement





## Urban Trail Building Movement



## Reimagining the Grand Riverfront

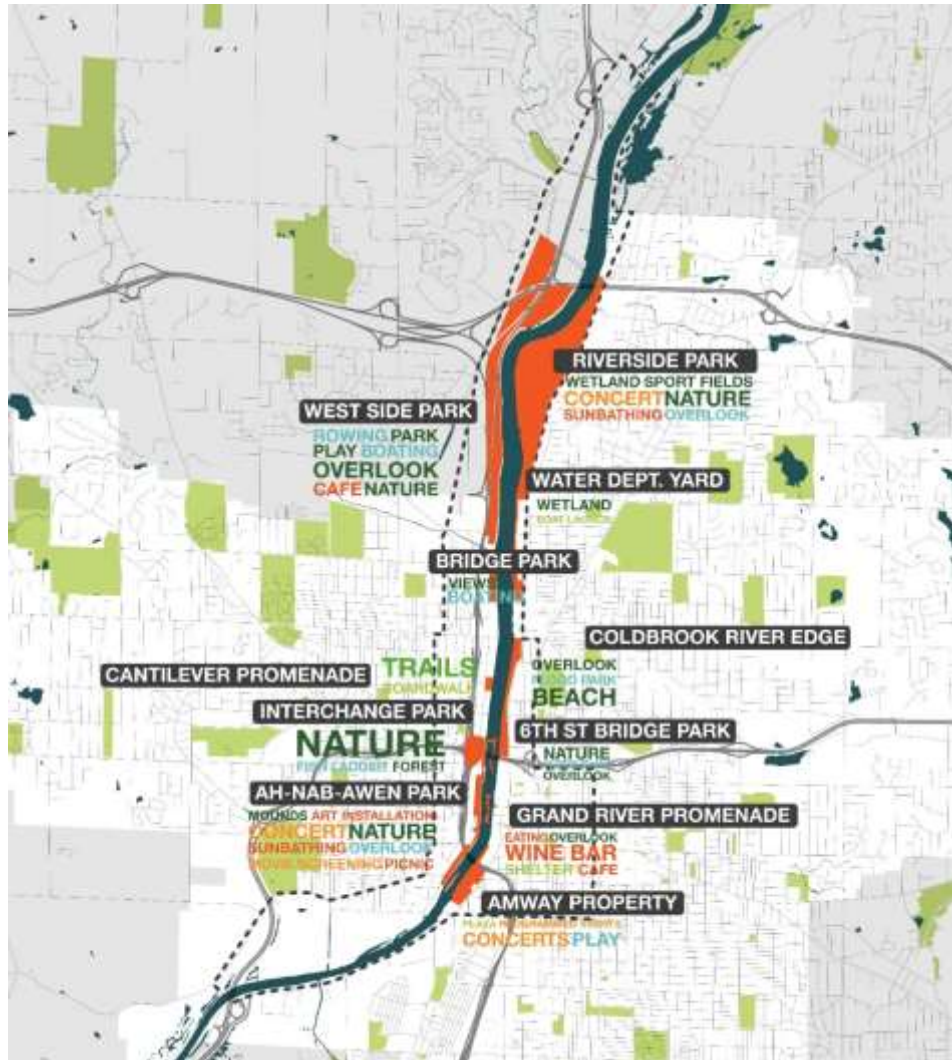




## Reimagining the Grand Riverfront



## Reimagining the Grand Riverfront



28 Riverfront Opportunity Sites

Each with a Different Program

Networked by a “Trail”

Organized Around Key Priorities:

- A River For All
- Enhanced Public Access
- Signature Public Spaces
- Environmental Restoration
- Economic Competitiveness
- Community Resilience



# URBANWATERS

## FEDERAL PARTNERSHIP

The partnership offers an opportunity to realize urban waterway and watershed revitalization goals that are larger than, and beyond the resources of any individual community, agency, or mission.

-- Jo-Ellen Darcy, Assistant Secretary of the Army for Civil Works, U.S. Army Corps of Engineers





# Why Grand Rapids?



*St. Mary's Rapids*

## Why This Place is Called Grand Rapids

Many people living in Grand Rapids have given little thought to the origin of the name of their home city. There is nothing in the present aspect of the river itself to suggest any rapids, to say nothing of any grand rapids. In the very early days the river presented a much different aspect than it does now. Then there were some very grand rapids—rushing waters that extended from near Sixth Street to Wealthy Street. To give one an idea of the great decline or fall in the river bed, we have only to compare it with the rapids at Sault Ste. Marie.

The Soo Rapids have a fall of 20.6 feet in approximately three miles, and the rushing waters near the International Bridge are a source of interest to the many visitors that go to that part of Michigan.

The fall in the river bed at Grand Rapids from Sixth Street to Wealthy Street is 17.4 feet, or only an approximate of four feet less than the fall that covers three miles and more at Sault Ste. Marie.

This sharp fall or decline in the river bed at Grand Rapids is disguised because of the power canals on each side of the river which take up the water and carry it through many factories and out through numerous tail races, so that the name "Grand Rapids" is not suggested any more by the present appearance of the river.







# Where did the Rapids go?

- Hundreds of tons of limestone were removed from the Grand River
  - Navigation
  - Movement of Logs
  - Building

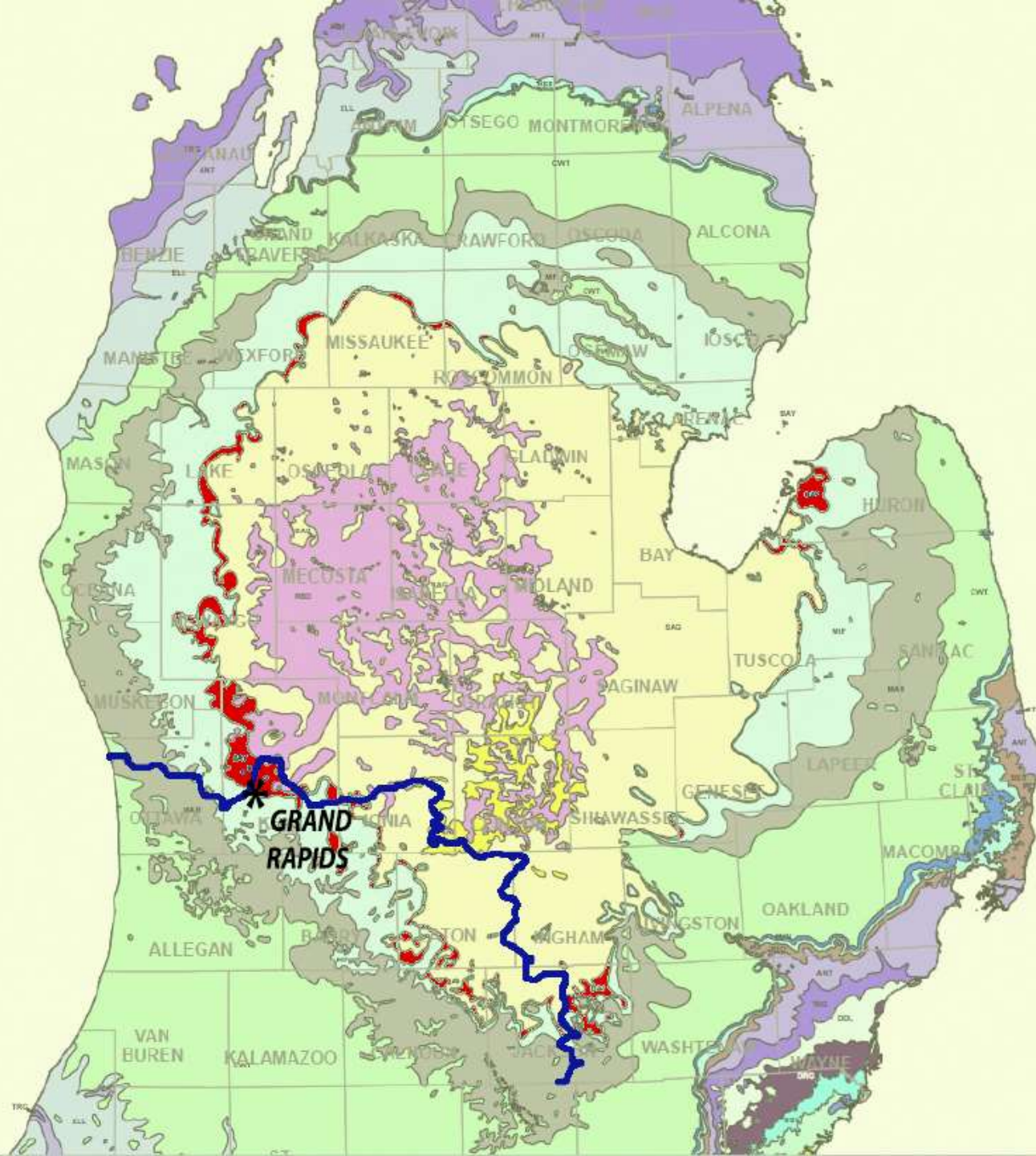


Limestone from the Grand River was used to build St. Mark's Church



Photo: Courtesy of St. Mark's Church



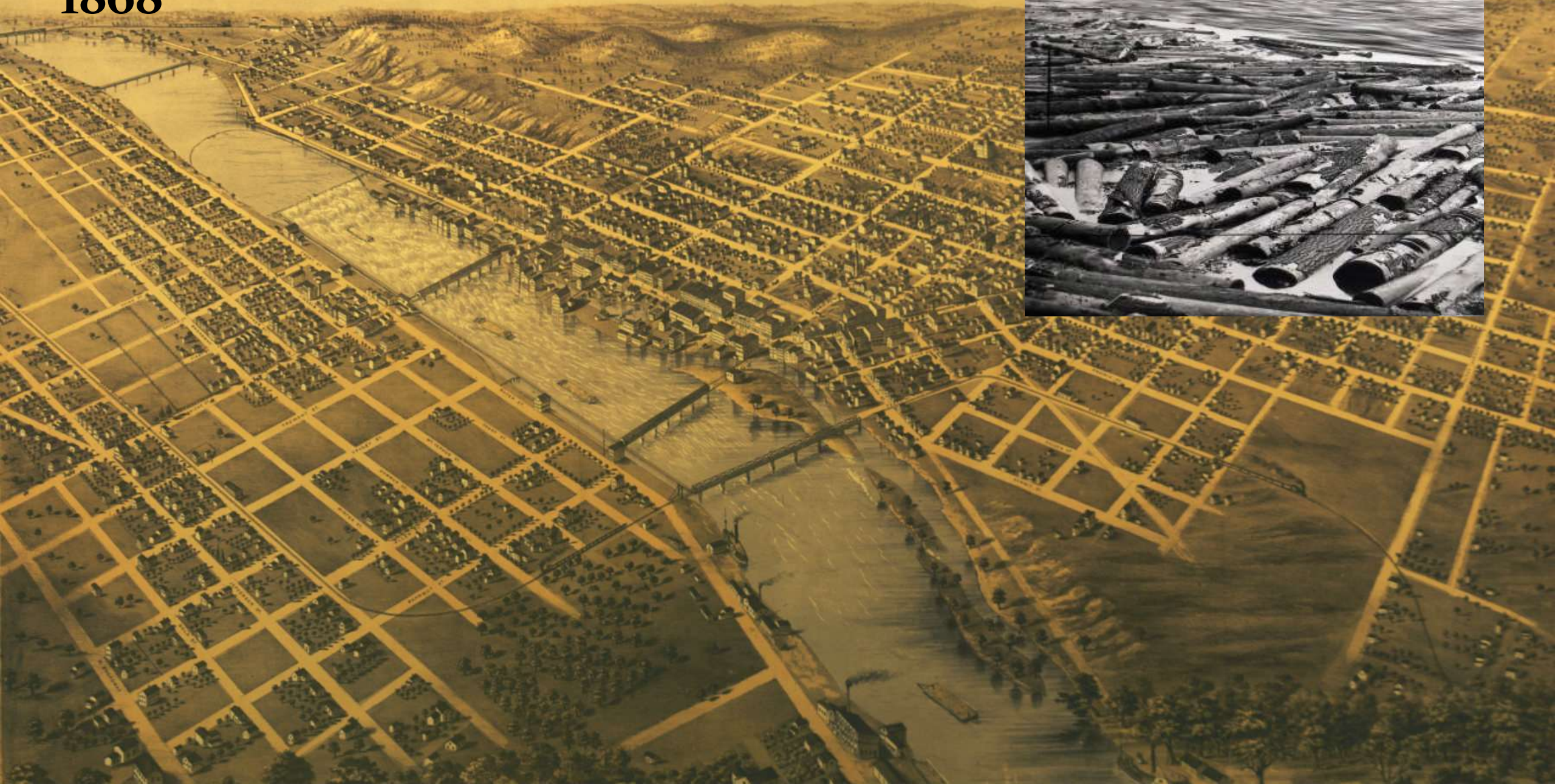


## Grand River Facts:

- 252 Miles Long from Jackson, MI-Lake MI
- The longest river in the state of Michigan
- Fed by 9 different MI rivers



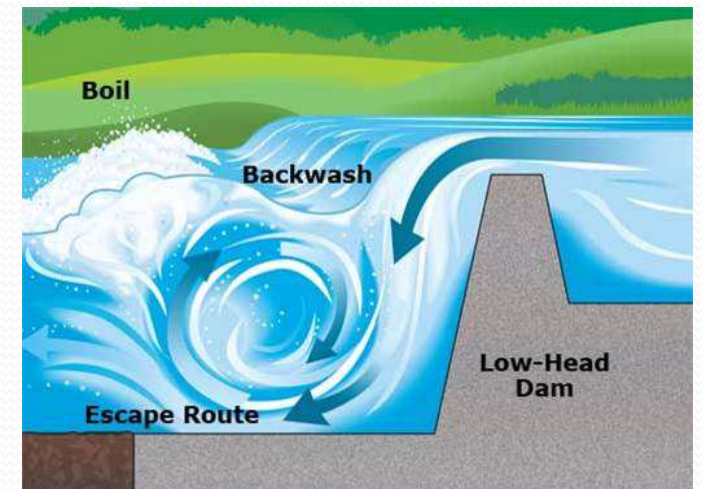
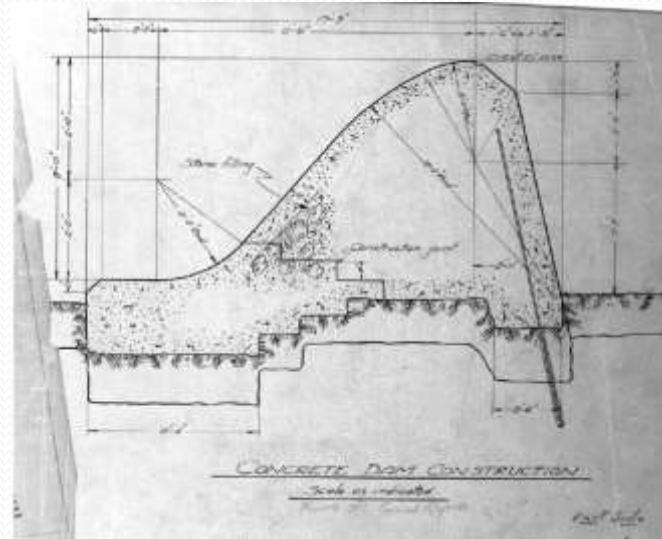
# Grand Rapids 1868

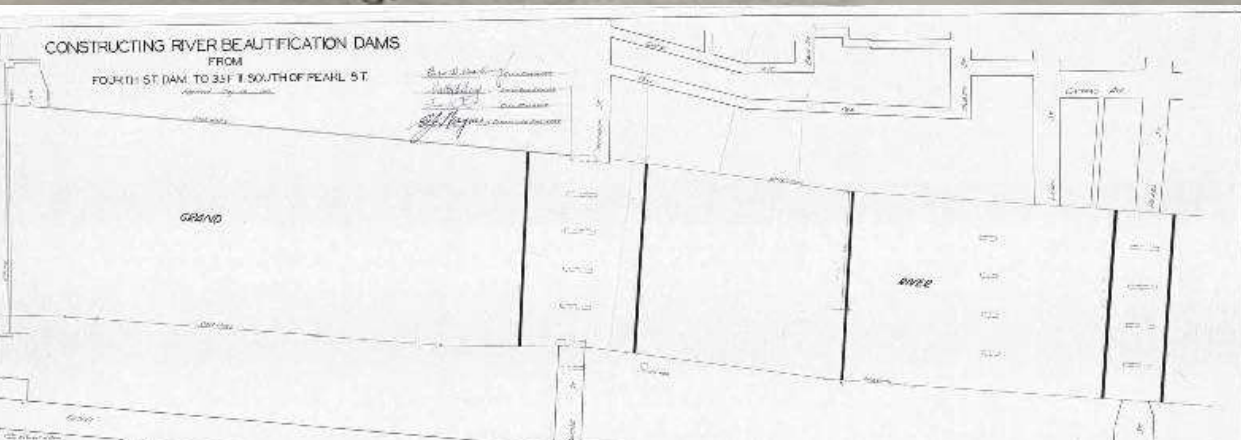




# The 6<sup>th</sup> Street Dam

- Low head dams are dangerous & block natural river connectivity
- 6<sup>th</sup> Street Dam is aging and has had little maintenance or inspection
- An opportunity to think differently about the way Sea Lamprey are managed in the Great Lakes Basin

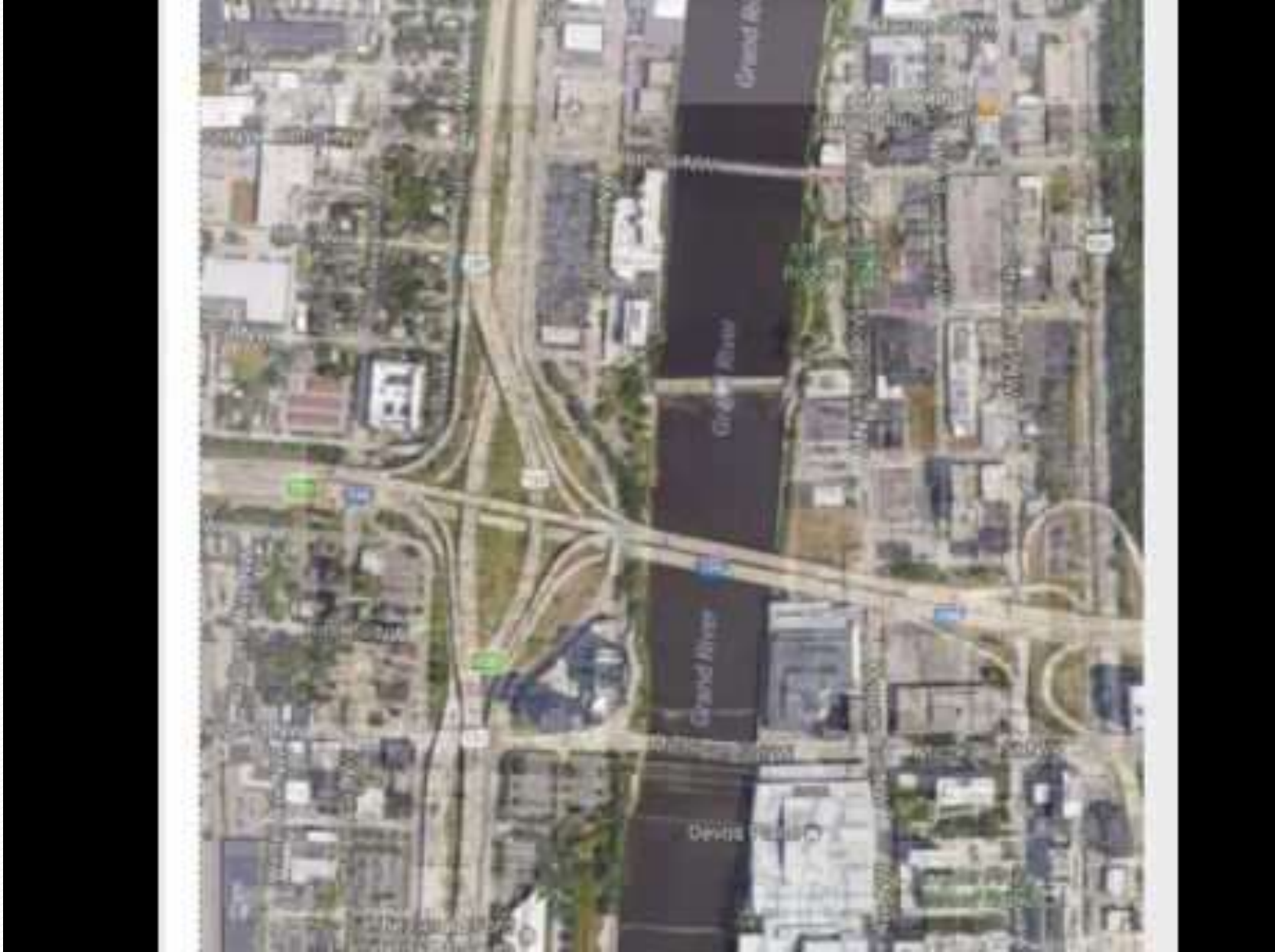






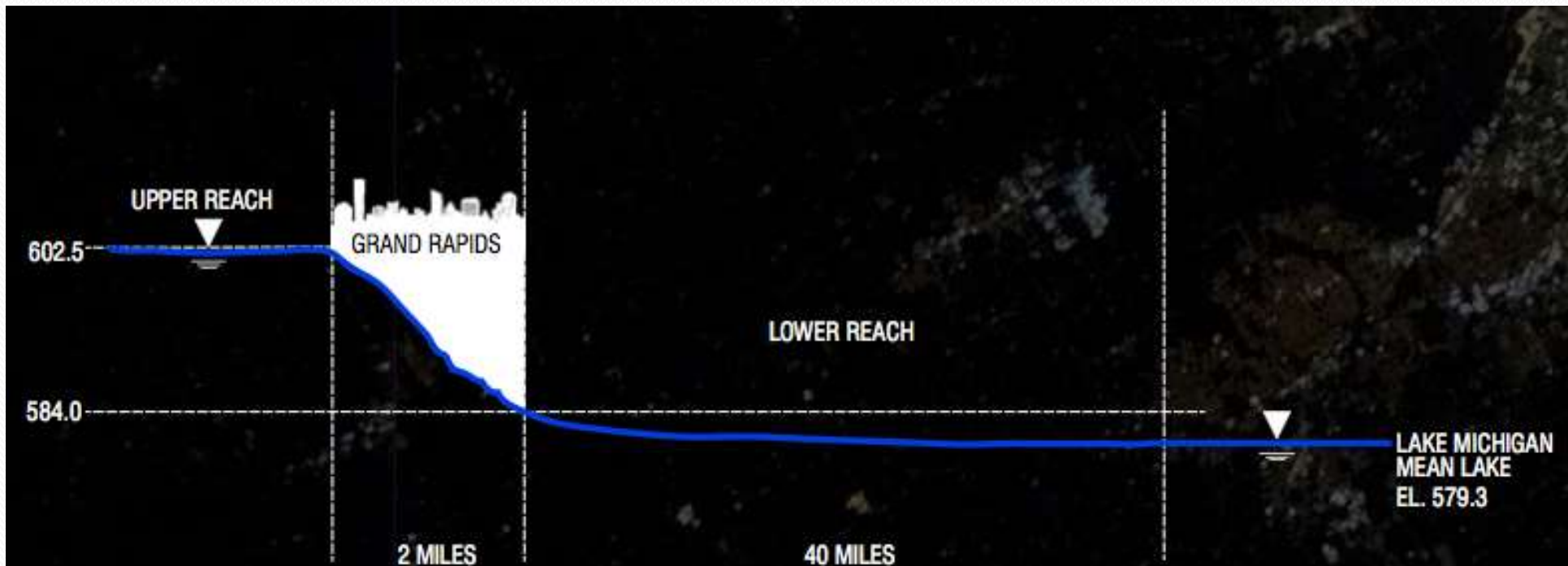








# The Opportunity for Restoration



## EXISTING CONDITIONS | RIVER PROFILE

Rapids make up only one percent of the rivers in the lower Michigan peninsula. Most of the rapids that did once exist have been flooded by dams, erased by dredging or severely degraded. Restoring the rapids in Grand Rapids is a rare, unique site specific opportunity.

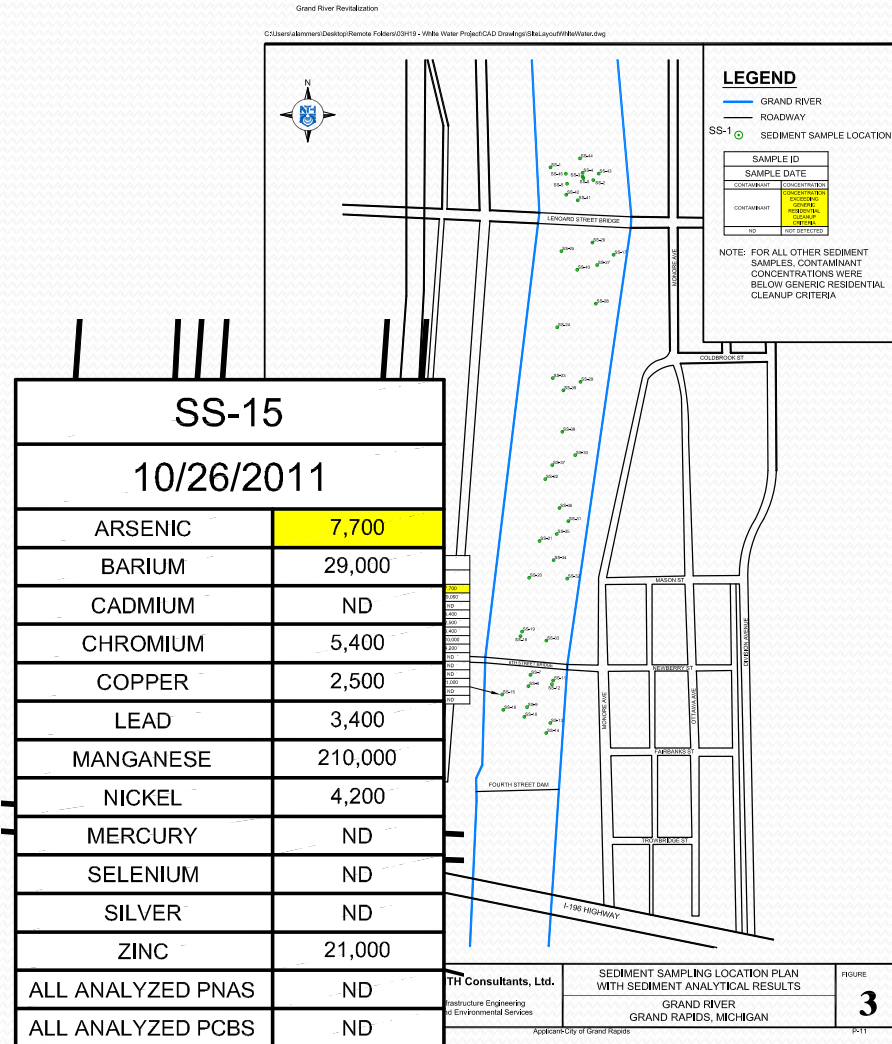


# The Challenges for Restoration

- Public awareness
- Perception of water quality
- Contaminated sediment
- Threatened & endangered species
- Invasive species
- Permits
- Engineering
- Construction
- Monitoring



# What about contaminated sediment?



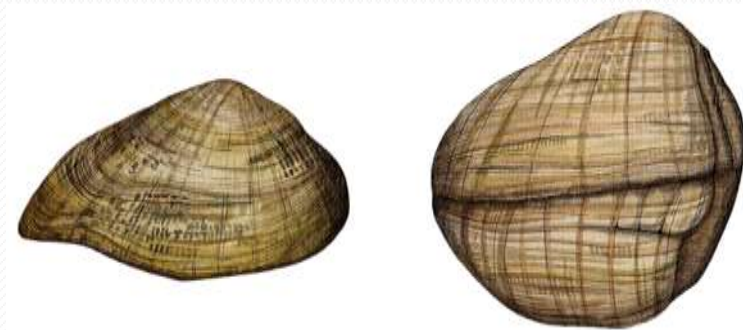
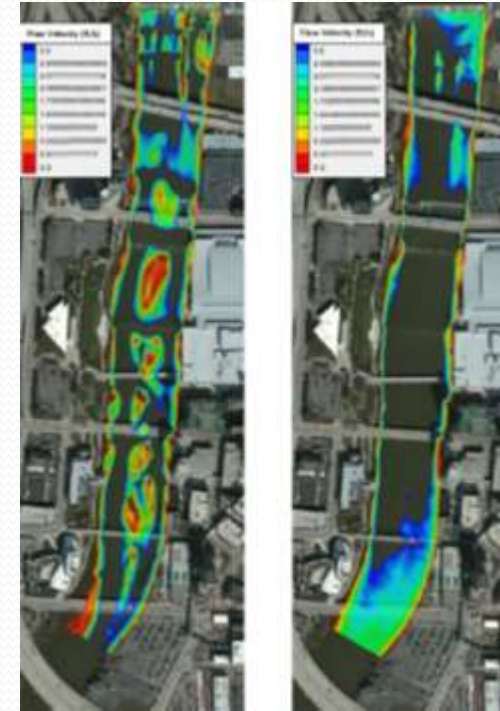
- Phase II environmental survey conducted in 2011
- 45 sample points
- Only 1 sample point w/ concentration exceeding generic residential cleanup criteria
- All other sediment samples were below



# What about endangered species?

## Snuffbox mussels

- Found 27 species of freshwater mussels
- 2 Federally endangered species
- 9 Michigan listed threatened or endangered species
- Grand River has rich mussel/clamming history

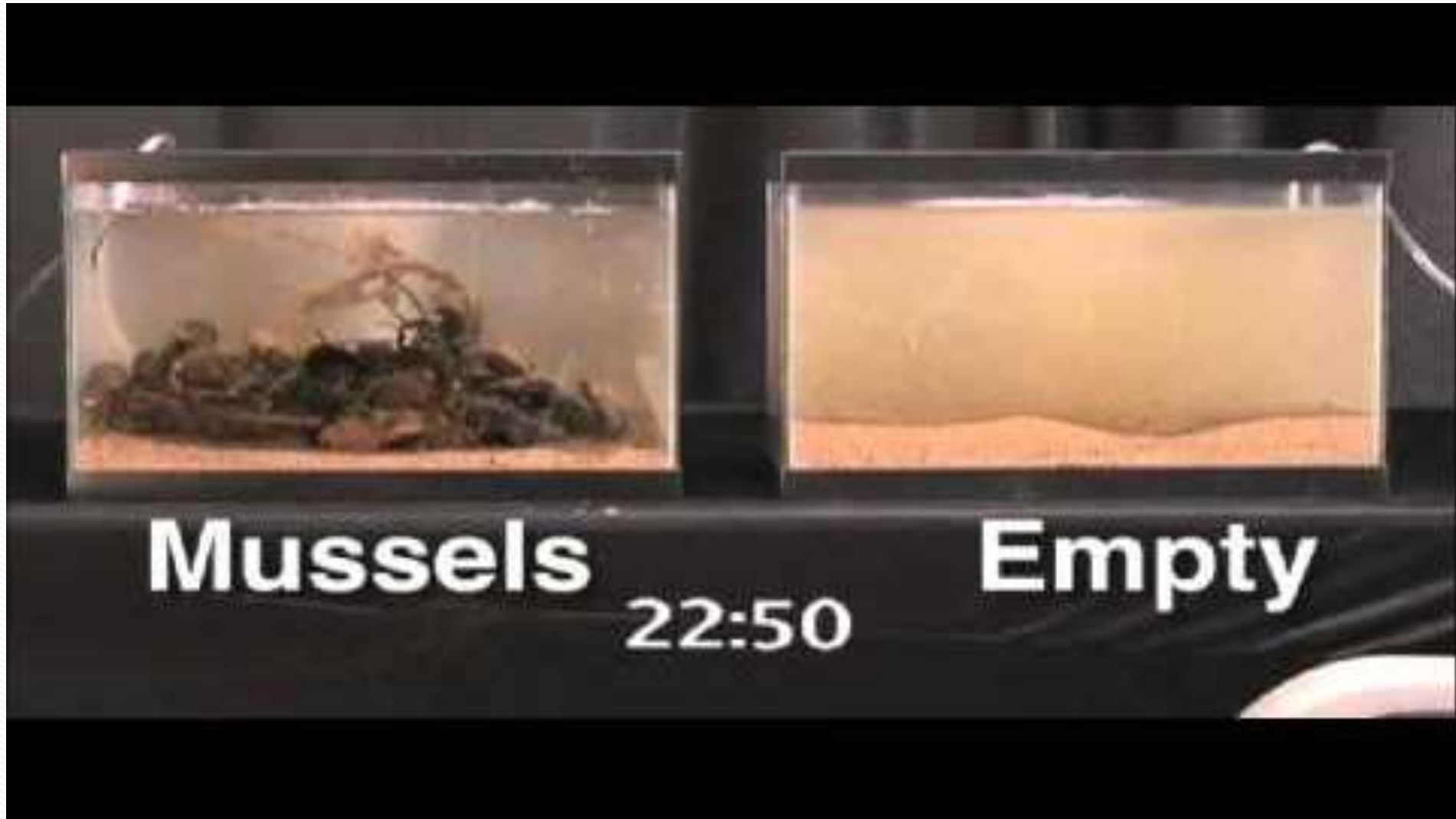






Source: Michael Backus; Youtube.com





Source: Eric Heupel; youtube.com



# What about Invasive Sea Lamprey?



- Sea Lamprey native to Atlantic Ocean
- Entered the Great Lakes through the Welland Canal at Niagara Falls
- Decimated Lake Trout Population in Lake Michigan
- USFWS spends millions in control through an agreement with Canada

# Public Awareness – Water Quality Monitoring

Bringing students to the river to assess water quality

- Macroinvertebrates
- Mussels
- Hester Dendys
- Temperature and pH
- Phosphorus and nitrogen





# Summer Science & Leadership Program



# Youth Programming



## #1 - Water safety and swimming

- Developing a level of comfort in and around the Grand River.
- Understanding when it's safe to get in the water, in terms of water quality, flood conditions, and escape routes.
- Lessons in fundamentals of kayaking, canoeing, and paddle boarding.



# Youth Programming



## #2 – Volunteer Force

- Develop opportunities for teen volunteers to be part of the project.
- Build an internship program to teach youth about an environmental issue from the different perspectives of the groups and organizations.
- Grow into workforce development opportunities.

# Project goals

- Restore the rapids to the Grand River for everyone
- Improve habitat and connectivity, water quality, riparian functions
- Create economic opportunities, enhance underserved communities and instill stewardship ethic







# Social Benefits

- Improving the community's connection to nature within the city
- Educational opportunities for urban youth
- Increasing recreational access & opportunities for a variety of users
- Linking neighborhoods together
- Recruiting & retaining talent
- The river becomes the gathering place for the community

# Environmental Benefits



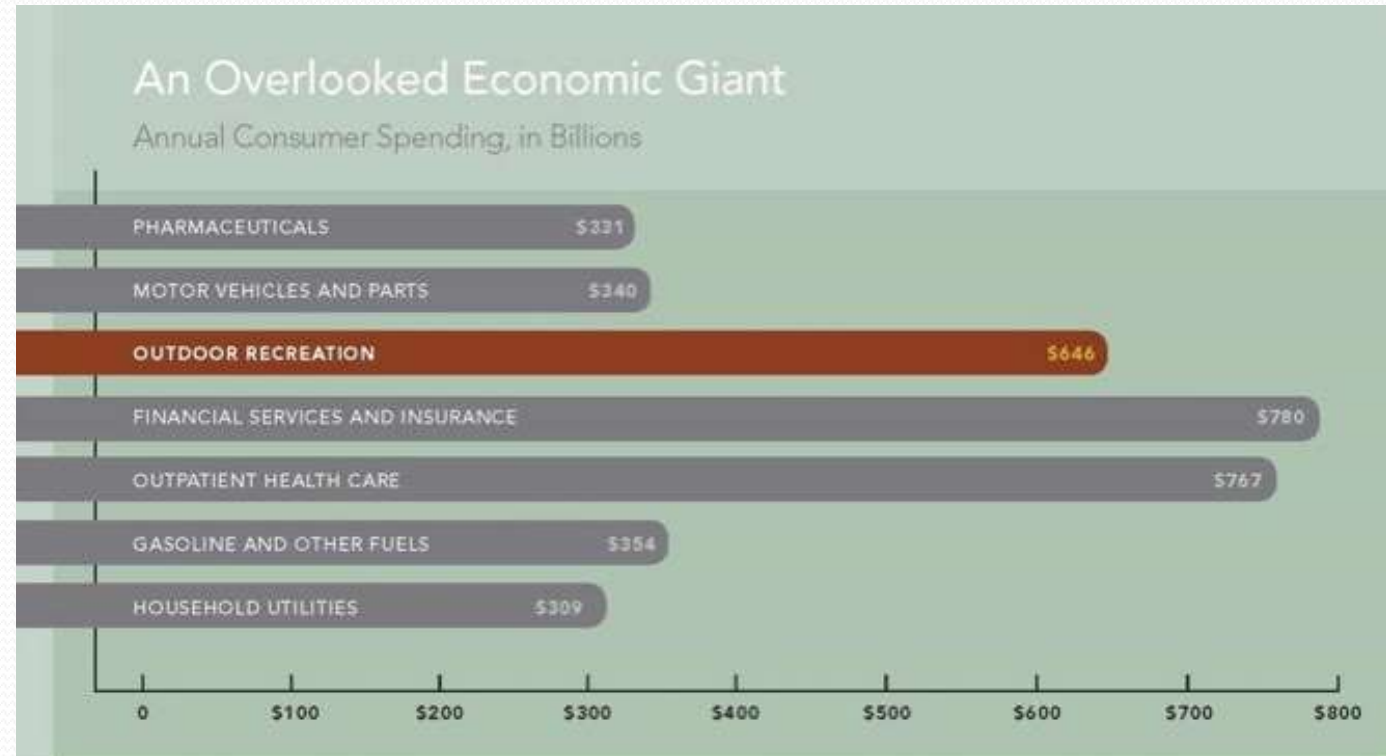
- Improve river connectivity & fish passage
- Reveal the submerged natural bedrock rapids
- Restore historic spawning areas for state-threatened Lake Sturgeon
- Improve river/habitat conditions for selected threatened & endangered species
- Inspire community wide stewardship of the Grand River





# Economic Benefits

- Expanded recreational use estimates net new economic impact of **\$15-\$19 million** per year.
- Support or create 80-96 jobs
- Improved river front property utilization and taxable values could increase by **\$117.7 million**



# Cultural/Spiritual Benefits

## *The Owashtanong*



Reverend John Booth's sketch of Chief Noonday's camp on the banks of the Grand River, c. 1831.  
Courtesy of the Grand Rapids Public Museum

- 3 groups of Anishinabek lived near the baw-a-ting, the rapids:
  - Odawa, Ojibwe, Potawatomi
- River used for gathering, trade, ceremony
- Continue to use Grand River today
- There is a spiritual element to rapids & moving water



# Construction Bridge Street to Fulton Street Phase I



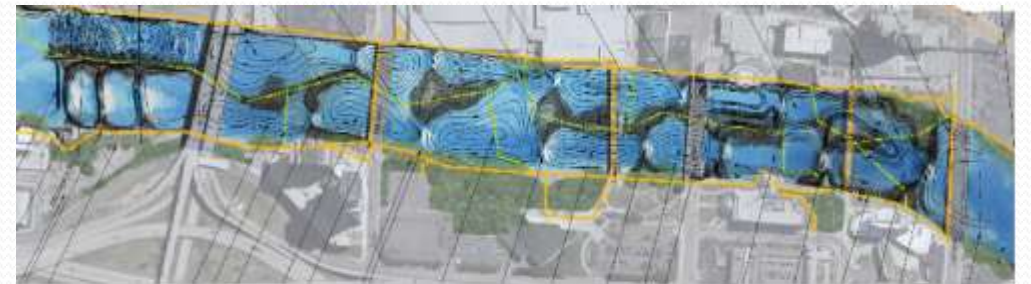
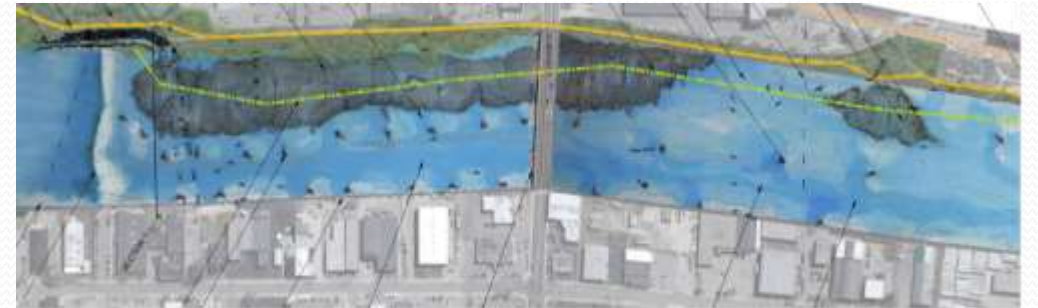
- \$8 million Federal awarded for instream habitat improvements and farmland conservation practices
- \$4.1 million used as part of the Grand River Restoration Project.
- Remove four smaller beautification Dams
- Import rocks/boulders to improve habitat and enhance recreational opportunities



# Permitting Update:

## *Bridge Street to Fulton Street*

- Federal Permit Milestone December, 2018
  - Submission of Biological Assessment to U.S. Fish & Wildlife Service is first step in federal process
  - Anticipating Federal Incidental Take Statement in August 2019
- State Permitting Process
  - Currently finalizing hydraulic design and flood modeling for state permits
  - Expecting to file state permits in Q4 2019





# Preferred Alternative

The preferred alternative is removal of four, low-head beautification dams and creation of more substrate diversity that will create numerous riffle features with associated run, pool, glide habitats.







RENDERED PROPOSED  
Law 307-2



WhiteWater



RIVER  
CORPORATION



# Construction of Proposed Adjustable Hydraulic Structure (AHS) Phase II



- Priorities of the AHS: Public Safety/Flood Control, Sea Lamprey Control, Fish Passage, Recreation
- Great Lakes Fishery Commission now contracting with the U.S. Army Corps of Engineers to build the structure.
- The \$19.5M structure will be built entirely with federal dollars with the exception of \$148,000 in private dollars to support the environmental permitting process
- Project partners in AHS MOU include:



US Army Corps  
of Engineers



CITY OF  
GRAND  
RAPIDS



Grand Rapids  
WhiteWater



# Sixth Street Dam to I-196 Phase III



- Removal of Sixth Street Dam
- Enhanced recreational opportunities
- Restructuring river channel to provide increased habitat and improved fish passage
- Fish Ladder will remain and likely still used to pass fish



# River Restoration: The Catalyst for Opportunities Along the River Corridor



## NORTH MONROE





## WATER DEPARTMENT STORAGE YARD







## Coldbrook Decommissioned Water Pumping Station Site





# Fish Ladder Site





## Ah-Nab-Awen Park River Walk







## Grand Rapids Public Museum



# Questions/Contact

## Name

Wendy Ogilvie

Matt Chapman

## Organization

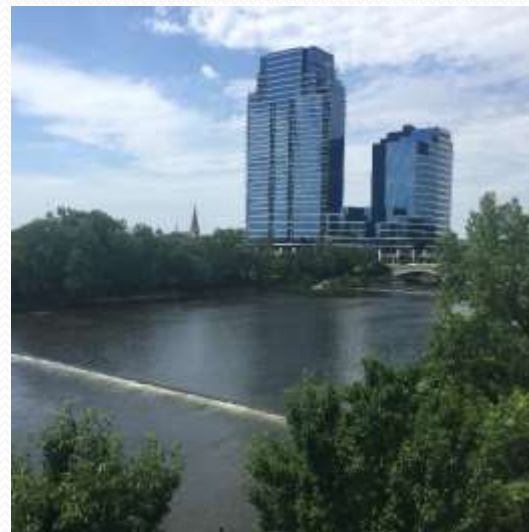
Grand Valley Metro Council

Grand Rapids Whitewater

## Email

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[matt@grandrapidswhitewater.org](mailto:matt@grandrapidswhitewater.org)







# Lower Grand River Organization of Watersheds A Grand Restoration StoryMap

LGROW.ORG

A Grand Restoration:  
<http://arcg.is/oSznbX>

A river revitalization



## A Grand Restoration

“Before the river was changed by the work of man, the rapids had a nearly uniform descent for about a mile...sufficient to give a decided turbulent and wild appearance to the waters, and to make a noise that broke the stillness of the forest and echoed from the neighboring hills.” *Charles A Whitmore, Kent Scientific Institute of Grand Rapids, 1895*

*The rapids at Sault St. Marie are what writers in the early 1900's considered the most similar to how Grand Rapids used to look*







**GVMC**

**Thank you.**

